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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/795,996

03/10/2004

Satoshi Yagi

501.43636X00

4254

24956

7590

05/16/2006

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.  
1800 DIAGONAL ROAD  
SUITE 370  
ALEXANDRIA, VA 22314

EXAMINER

BARTON, JONATHAN A

ART UNIT

PAPER NUMBER

2186

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/795,996	YAGI, SATOSHI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jonathan Barton	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/27/2006 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reams (US 6,438,660) in view of Beaukema et al. (US 2003/0093625) and further in view of the disclosed prior knowledge within the instant application.

a. As for claims 1, 3, 5, 7, 8, 10 and 11 Reams discloses

i. Reading the serial data from the *disk drive* in [block] units and *temporarily* storing this serial data [*in block* units] in the data storage unit (Col. 12 Lines 11-18);

ii. *Comparing a block of data in a destination storage area of the disk drive that is a write destination of the write data, and the serial data read*

*from the storage area of the disk drive and temporarily stored in the data storage unit (Col. 11 Lines 17-23, Col. 12 Lines 47-52);*

iii. When, *in response to receiving the write data*, the [block of] data in the *destination storage area of the disk drive that is a write destination of the write data* and the serial data read from the storage area of the *disk drive and temporarily stored in the data storage unit compared therewith* are the same (Col. 11 Lines 17-23, Col. 12 Lines 47-52),

iv. updating the serial data *temporarily stored in the data storage unit* by means of the write data (Col. 13 Lines 6-9, 14-16),

v. *so that the updated serial data is compared to the next-received write data* (Col. 13 Lines 6-17), and

vi. transferring [*in block units*] the updated serial data to the *disk drive* (Col. 22 Lines 51-58); and

vii. When, *in response to receiving the write data*, the [block of] data in the *destination storage area of the disk drive that is a write destination of the write data* and the serial data read from the *disk drive and temporarily stored in the data storage unit compared therewith* are different (Col. 12 Lines 47-52, Col. 13 Lines 10-13),

viii. transferring this serial data [---] to the storage device (Col. 22 Lines 51-58),

ix. Reading the serial data stored [in the block] in the *destination storage area of the disk drive* constituting the write destination of the write

data, and updating the data *temporarily* stored in the data storage unit by means of the write data so *that the updated data is compared to the next-received write data* (Col. 13 Lines 10-13).

b. Reams fails to disclose the following feature which is taught by Beaukema et al.:

x. generating a security code based on the serial data *temporarily* stored in the data storage unit, adding the generated security code to the serial data stored in the data storage unit (Beaukema Par. 0026).

c. It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the CRC/security code taught by Beaukema with the data storage system disclosed by Reams because both systems are for storing data and Beaukema's invention teaches using a common security code for the purpose of avoiding data corruption, which is a very useful and often necessary element of a data storing system (Beaukema Par. 0026 Lines 7-9).

d. The combination of Reams and Beaukema fails to disclose moving a *block* of data. Applicant has already admitted this feature to be well known in the art within the instant application. This disclosure can be found in on Page 1 Lines 17-18 of the Substitute Specification (Filed 4/30/2004) under the Background of the Invention section.

e. It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the block transfers taught by the Background of The Invention of the instant application with the data storage system created by

the combination of Reams and Beaukema because the block transfers are simple, common and allow connection and interface across a large variety of networks (Pg. 1 Lines 19-26 of instant application specification) and makes the system more widely compatible and useful.

f. Further for claim 7 Reams discloses

xi. A data controller (Col. 2 Lines 44-49); and

xii. A processor (Col. 2 Lines 44-49).

g. And Beaukema teaches a host interface (Par. 0029 Lines 9-15).

h. Further for claim 10 Beaukema teaches

xiii. A storage device that is a disk drive (Par. 0024).

i. It would have been obvious to add the additional "host interface" and "disk drive" taught by Beaukema to the data storage system previously created by the combination of Reams, Beaukema, and the common knowledge disclosed by the instant application because they are common features well known to be useful within the art for increasing system usefulness and reliability among other benefits.

j. As for claims 2, 4, 6, 9 and 12 Reams discloses

xiv. Serial write data that is serially received by the data receiver is not necessarily transferred to successive areas of the block in the order in which this data is received (Col. 12 Lines 25-40).

***Response to Arguments***

3. Applicant's arguments filed 4/27/2006 have been fully considered but they are not persuasive.

a. Applicant points out "an important distinguishing feature" to be "the block nature or the write data that is written by the data control unit from cache memory to the disk drive". As discussed above however, Applicant has already admitted this feature to be common knowledge and practice within the art (See Page 1 Lines 17-18 of the Substitute Specification filed on 4/30/2006). Since Applicant has already admitted this limitation to be common in the art, the arguments that the limitation makes the invention as claimed unique and patentable are not valid. No other issues have been raised by Applicant, therefore claims 1-12 stand rejected.

b. Examiner points to the Summary of the Invention on Page 3 at Lines 17-30. This section of the instant application seems to detail more accurately the patentably distinct aspects of the invention. From the Examiner's understanding this section is what allows the unique function disclosed on Page 4 Lines 1-15. Examiner recommends adding claim limitations reciting these features in order to more accurately claim the invention and move it towards condition for allowance.

Art Unit: 2186

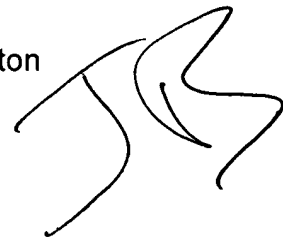
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Barton whose telephone number is 571-272-8157. The examiner can normally be reached on Monday - Friday 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jonathan Barton  
Examiner  
Art Unit 2186



JB



MATTHEW KIM  
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